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ABSTRACT

The syntax module of the language development curriculum portion of the Early Childhood-Special Education Teacher Preparation Program at the University of Virginia includes the following areas: (1) various aspects of syntax development as background for an outline of the ontogeny of syntax development in children 18-106 months of age; (2) syntax development outcomes appropriate to young children, including the relevancy of such, with special reference to Chomsky's theoretical position; (3) techniques for measuring syntax development with particular emphasis placed upon techniques developed by both Lee and Menyuk; (4) general condition needed for development of syntax; (5) specific conditions and appropriate teaching strategies for development of (a) the ability to express oneself in identified patterns of standard English, (b) the ability to ask questions, and (c) fluency; and (6) cognitive and skill competencies needed by teachers for facilitating the development of syntax in young children. (ED)

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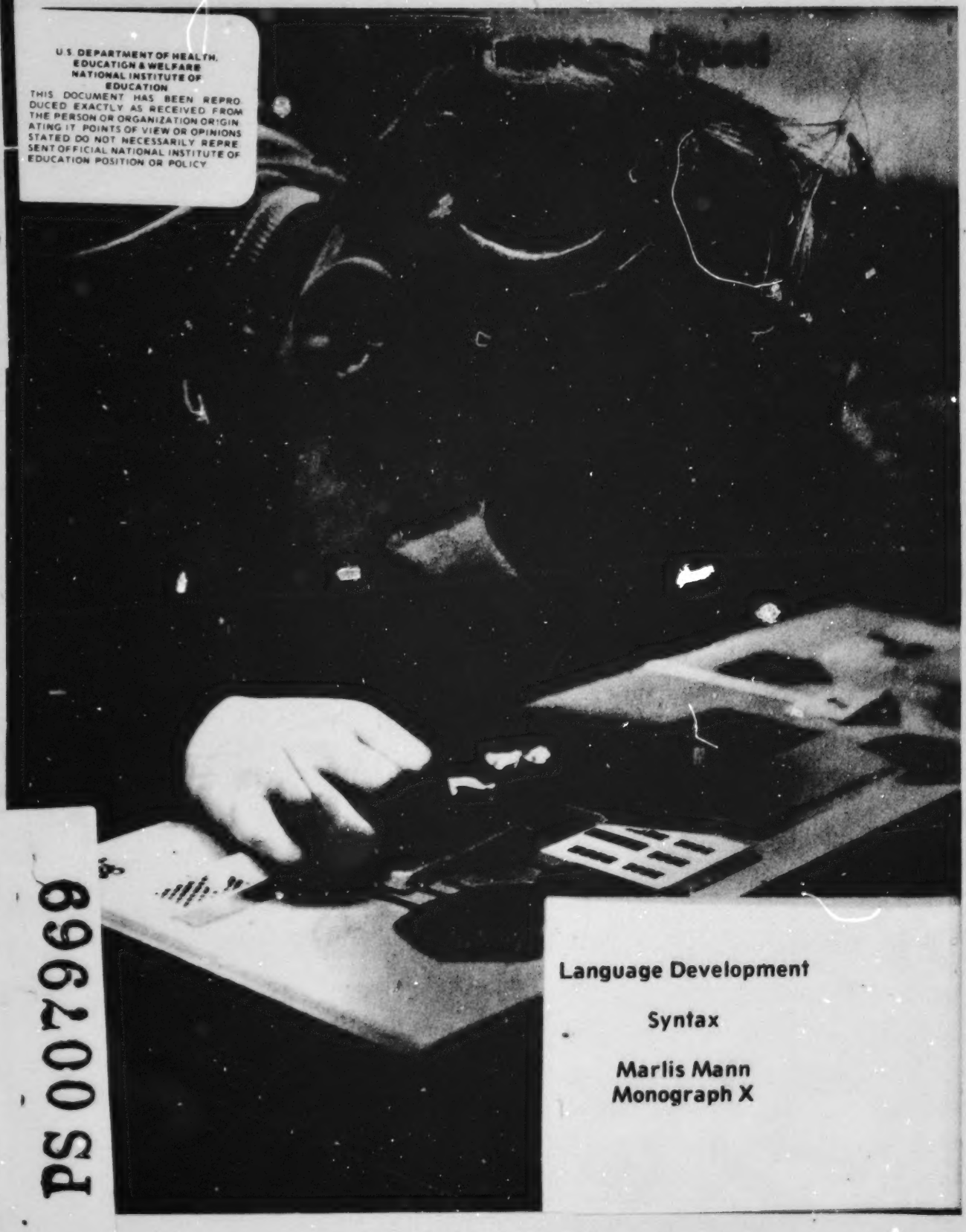

Language Development

Syntax

Marlis Mann

Monograph X

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STEP I: GOALS OF SYNTAX DEVELOPMENT FOR YOUNG CHILDREN

Ontogency of Grammar Development. The sequential development of English grammar has been studied by several (Braine, 1963; Brown and Bellugi, 1964, Lee 1966; Meuyuk, 1964; Chomsky, 1957).

Following is a sequential structure which is evident the language development of children.

Phrases

2 word noun Phrase	2 word Designative	2 word Predicative	2 word Verb Phrase
3 word noun Phrase	3 word Designative	3 word Predicative	3 word verb Phrase
	Designative Construction	Predicative Construction	Verb Phrase Construction
	Designative Sentence	Predicative Sentence	Actor-Action Sentence

Simple Transformations

a.	Passive	He was tied up by the man.
b.	Negation	I am not.
c.	Question	Is he sleeping?
d.	Contraction	He'll choke.
e.	Inversion	Now I have kittens.
f.	Relative question	What is that?
g.	Imperative	Don't use my brushes.
h.	Pronomicalization	There isn't any more.
i.	Separation	He took it off.
j.	Auxiliary verb	
	1. be	He is not going to the movies.
	2. have	I've already been there.
	3. do	
k.	Got	I've got a book.
l.	Do	I did read the book.
m.	Possessive	I'm writing Daddy's name.
n.	Reflective	I cut myself.

Generalized Transformations (These are derived from 2 kernel sentences)

o.	Conjunction	They will be over there and momma will be over there.
p.	Conjunction delection	I see lipstick and a comb.

q.	Conditional - if	I'll give it to you if you need it.
r.	So	He saw him so he hit him.
s.	Causal	He won't eat the grass because they will cry.
t.	Pronoun in conjunction	Blacky saw Tippy and he was mad.
u.	Adjective	I have a pink dog.
v.	Relative clause	I don't know what he's doing.
w.	Complement	
	1. infinitival	I want to play.
	2. participial	I like singing.
x.	Interaction	You have to clean clothes to make them clean.
y.	Nominalization	She does the shopping and cooking and baking.
z.	Nominal compound	The baby carriage is here.

Morphemes (Research studies eliciting and observing morpheme expression in children shows a pattern in the order of acquisition for the following fourteen morphemes:)

1-present progressive, 243-in, on, 4-plural, 5-past irregular, 6-possessive, 7-uncontractible copula, 8-articles, 9-past regular, 10-third person regular, 11-third person irregular, 12-uncontractible auxiliary, 13-contractible copula, and 14 contractible auxiliary.[1]

Outogeny of Grammar fluency .

21 Months	Tries to tell experiences
24-30 Months	Language is beginning to be used more extensively as communication for wants, needs, and ideas. Child tries to use words in telling his physical needs or answers simple questions, but does not carry on conversation.
38-48 Months	Frequent questions - many times asks questions to which he already knows the answers. Uses language easily to tell a story or relay an idea to someone else. Expresses feelings, desires, and problems verbally.
48 Months	Can tell a lengthy story mixing fact and fiction. Can carry on lengthy conversation with adult and children, though he may make grammatical errors and missuse words.
60 Months	Answers questions more succinctly and to the point.

Questions for information, not merely social intercourse or practice in speaking. Uses conjunctions more freely.

Outogeny of children's questions. Bellugi (1965) in a study of three children identified three sequential stages in the development of interrogative structures. Each state was one to five months long starting somewhere between the 18th and 28th month depending on the child's linguistic abilities. Following are these stages of interrogative development in children's language:

Stage I
a. inflectious, auxiliaries, articles and most pronouns were absent.
b. child used intonation to mark a question
c. there was no yes-or-no questions and only a few "wh" questions.
d. there were no tag questions.
e. the child did not appear to understand the interrogatory structure when he heard it.

Stage II
a. articles, pronouns, and negatives preverb forms appeared.
b. auxiliaries were still not present, nor were tag questions.

Stage III
a. emergence of use of auxiliaries, auxiliary inversion, and the do transformation.
b. inversion and transformation were found in yes-or-no questions but were absent in "wh" questions.
c. tag questions were still absent, but children understood and responded well to questions.

Combined Syntax Ontogeny

Age in Months	Stage	Appropriate Equipment	Alternatives
18	Begins to combine words Asks with words (Cattell)	Books with large pictures	Reinforce Child's verbalization
21	Joins 2 words in speech frequently. (Cattell)		Extend child's verbalization
22	Uses 2 concepts in one sentence - "Daddy gone".		Elaborate child verbalization
24-30	In same sentence expresses intention and action: "Peter slide down." Does not relate experiences in well-defined past tense. Indulges in soliloquy and dramatic play in order to hatch his words, phrases, and syntax. Discovers use of the "question" and asks names of things. Spontanous word combinations in verbal interactions (Stanford Bonet)		
36	Generative grammar develops (development by his own rules). Experiments with many syntactic forms. Two word-phrases most frequent form: "That boy (is) naughty;" "Mommy car stop" (Mommy's car stopped; wouldn't run). Designative constructions coming into use; phrases expanded into use; phrases expanded into subject-predicate sentence. (What that thing go round?) Mean length of response: 3.4 words.		

80300

Age in Months	Stage	Appropriate Equipment	Alternatives
42	Grammatical categories. Speech is made up of: nouns-17%; verbs-22.8%; adjectives-6.5%; adverbs-10.1%; pronouns-19.8%; conjunctions-2.2%; prepositions-6.7%; interjections-1.7%; articles-6.9%; and unclassified-6.3%. Uses new adjectives: strong, new, different. Uses new adverbs: maybe, too. Uses auxiliaries: might, could. Gains skill in permutations: makes questions from declarative statements. Mean length of response: 4.3 words.		
48	Frequent questions - many times one to which he already knows the answers. Uses language easily to tell a story or relay ideas, feelings, desires, problems. Longer sentences are compound and complex in structure. Tells a story. Speaks of imaginary conditions: "Suppose that", "I hope". Can tell a lengthy story mixing fact and fiction. Can carry on lenghty conversation with adults and children, though he may make grammatical errors and misuse words. Questions at a peak, not always interested in explanation but rather how answers fit own thought. Skill increasing in transformations (modification in sentence which transforms kernel).		See language experience strategy

66068

Age in Months	Stage	Appropriate Equipment	Alternative
48 cont'd.	Sentence structure advances rapidly. Begining to use complex and compound sentences, 6-8 words in lenght. Mean sentences length: 4.2 words. Speech is made up of: nouns-16.3%; verbs-23.1%; adjectives-6.7%; adverbs-10.4%; pronouns-20.3%; conjunctions-2.8%; prepositions-7.5%; interjections-1.3%; articles-7.5%; and unclassified-4.1%.		
48-60	Knows rules for forming the plural and possessive for nouns. Knows rules for past tense. Knows rules for third person singular for verbs.		
54	Use of complex and compound sentences increasing. Reverses syllabic and word order occasionally in sentence. Elaborates sentence by use of conjunction; makes spontaneous corrections in grammar. Mean length of response: 4.7 words.		
60	Language essentially complete in structure and form. Answers questions more succintly and to the point. Uses all types of sentences including complex ones with hypothetical and conditional clauses. Uses conjunctions more freely, but generally frequency of parts of speech same as at 4 years. Grammar reasonably accurate; makes many		

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Age in Months	Stage	Appropriate Equipment	Alternative
	spontaneous corrections. Sentence structure expanding rapidly in accuracy and complexity. Embedding more common. Develops relative clause. Mean length of response: 4.8 words.		
66	Permutations. Great gains in sentence making of all types. Uses all basic structures. Mean length of response: 4.9 words. Makes some errors in grammar but corrects them spontaneously.		
78-94	Speech is made up of: nouns-17.1%; verbs-25%; adjectives-7.6%; adverbs-10%; pronouns-19.2%; conjunctions-2.6%; prepositions-7.6%; interjections-1%; articles 8.3%; and unclassified-1.6%. Sentence length and complexity develops sharply; has command of every form of sentence structure. Mean sentence length: 6.5 words.		
94-106	Chief grammatical errors now are common to his cultural environment. Mean length of response: 7.2 words.		

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Syntax Development Outcomes

It is our knowledge of the rules of combination, the syntax of the language, that governs how we construct and understand an infinite number of sentences from a finite vocabulary. Syntax gives language its power.

Syntactic component may be thought of as a device that generates a set consisting of representations of all the well-formed sentences of a language. Since this set is clearly infinite it cannot, by definition, be represented by a list. Hence, the form of the grammar is a finite set of rules, at least some of which must be recursive, i.e., capable of indefinite reapplication.

The conceptually simplest device for characterizing an infinite set (i.e., simplest realization of a set of recursive rules) is a finite state source, and the sets generated by such sources are called finite state languages. A finite state grammar views sentences as sequences of items chosen from an available inventory - the vocabulary of the language so that each choice after the initial one is conditioned by one or more of the preceding sources (Saporta, 1961). A generative grammar is a system of rules that derives an infinite set of well-formed sentences and assigns them correct structural descriptions.

The phrase structure level of language represents the adult's sense of hierarchical grouping in a sentence - the feeling that a sentence breaks into natural major constituents which in turn break into natural smaller constituents. It also represents such basic sentence relations from traditional grammar as subject of a sentence, predicate of a sentence, object of a verb, etc. The phrase structure includes everything essential for a complete semantic interpretation, but it does not order elements as they are ordered in the ultimate structure of language.

Next in the sequence of syntax development is the transformational level. The base structure of a grammar is combined in various strings to produce the transformational level or surface level. Transformational rules map strings (or phrases) into new structured strings that are sentence types. Transformations can delete, substitute, and add elements as phrase structure rules cannot.

A transformational rule describes the structure of the kind of string to which it is applicable, there will generally be an indefinite number of strings that satisfy that structural description. In an actual transformation it is a particular string that is transformed.

Morphemes are the smallest unit of meaning. They can occur alone as a word or not alone as ing, un, pre, which are called "bound". A word may be composed of one or more morphemes; "cats" consists of two morphemes - cat and the plural suffix. Morphemes are divided into classes, and sentences are composed of certain

ordered sequences of classes. Morpheme classes are comparable to traditional parts of speech but are identified in terms of substitutions in linguistic contexts rather than in terms of meaning. Thus, the morphemes that fit in the sentence "The _____ was good", constitute a class. Morpheme classes can be divided into two groups, lexical and functional classes. Lexical classes are few in number, but have many members. In English these include nouns, verbs, adjectives, and certain adverbs. Function classes constitute a large number of small, closed classes. In English morphemes include conjunctions, prepositions, auxiliaries, and suffixes such as the plural and past tense morphemes (Miller and Ervin, 1964). Rules on this level really belong to the phonological component.

In order to learn grammar, a child must segment the speech he/she hears into morphemes because morphemes are the ultimate units of grammatical rules. There are small sound units called phonemes and longer sound combinations which carry semantic meanings but these cannot be formulated in terms of phonemes - they are morphemes.

The child hears, "my book," "your bike, "my birthday", etc. If he/she erroneously segmented these phrases into morphemes, They may sound like "myb/ook", "yourb/ook", "myb/irthday."

Morpheme segmentation errors such as myb/ook, or yourb/ook are uncommon. The child seems to have a highly effective procedure for developing morpheme segmentation.

Although all languages show fundamental similarities in their syntactical structures, there is enormous variation in morphological or inflectional detail. Therefore a child must first grasp underlying grammatical categories as case, gender, person, number, tense, aspect, etc., if he is to master all the particular morphophonemic means used to express these categories in his language (Ferguson and Slokin, 1973).

In both observational and experimental studies a phenomena of morphological overgeneralization or overregularization has been noted. A child will acquire the basic functions of an inflectional system before he masters the particular form of inflections. For example, he will generalize a rule to all instances, more than is required, as in his initially saying "comed" before gradually discriminating the proper form of application as being "came" (Ferguson and Slokin, 1973).

There are additional complex factors affecting children's acquisition of morphological rules. These include his cognitive development, perceptual salience, the frequency of inflections heard in a speach model, the regularity of the inflectional rule, the number of semantic functions performed by a given suffix in the language, and the ease with which the morphophoneme can be produced in the child's own speech.

Children make two thirds of errors in their inflectional

expression: errors of omission and errors of commission.

Brown (1973) has postulated a reason to explain a child's initial omission of morphological rules. He feels that the child expects to be understood always. And since the child speaks at home, in familiar surroundings, and to members of the family who know his history and inclinations, he will be understood, making accurate, usually redundant morphophonemic expression unnecessary for him. However as the child moves out into new surroundings, his speech will require more adaptive flexibility. Thus he will find it necessary to learn a lexicon and syntax familiar to his new and particular audiences. This obligates his learning to express always and automatically those grammatical categories of agent, action, number, tense, etc., in proper morphological form.

Cazden (1973) states that it is the errors of commission that provide us with a better guide, through inference, to a child's linguistic knowledge. Two errors of commission can be observed: first provision of the wrong allomorph (i.e., knife-es for knives or pantses for pants) and second, failure to observe the division between regular and irregular forms in plurality, possession, present indicatives, and past tense (i.e., mans for men, mines for mine, doos for is doing, maked for made). One can be sympathetic, though, with children's errors in irregular forms since the rule exceptions are certainly arbitrary requiring rote learning in each case.

The specific syntax development outcomes are as follows:

To develop the child's ability to express himself/herself the identified grammatical patterns of standard English. Developmentally the beginning of syntax development are the phrase components of grammatical structures: 2-word noun phrase; 2-word designative phrase; 2-word predictive phrase; 2-word verb phrase; 3-word verb phrase; 3-word noun phrase; noun phrases incorporated into constructions; designative construction; predicative constructive; verb phrase construction; designative sentence; predicative sentence; actor-action sentence.

Simple Transformations

a.	Passive	He was tied up by the man.
b.	Negation	I am not.
c.	Question	Is he sleeping?
d.	Contraction	He'll choke.
e.	Inversion	Now I have kittens.
f.	Relative question	What is that?
g.	Imperative	Don't use my brushes.
h.	Pronomicalization	There isn't any more.
i.	Separation	He took it off.
j.	Auxiliary verb	
	a. be	He is not going to the movies.
	b. have	I've already been there.
	c. do	

k.	Got	I've got a book.
l.	Do	I did read the book.
m.	Possessive	I'm writing Daddy's name.
n.	Reflective	I cut myself.

(Generalized Transformations (These are derived from 2 kernel sentences)

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p.	Conjunction delection	I see lipstick and a comb.
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r.	So	He saw him so he hit him.
s.	Causal	He won't eat the grass because they will cry.
t.	Pronoun in conjunction	Blacky saw Tippy and he was mad.
u.	Adjective	I have a pink dog.
v.	Relative clause	I don't know what he's doing.
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	1. infinitival	I want to play.
	2. participial	I like to sing
x.	Interaction	You have to clean clothes to make them clean.
y.	Nominalization	She does the shopping and cooking and baking.
z.	Nominal compound	The baby carriage is here.

Morphemes

a. present progressive
b. in, on
c. plural
d. past irregular
e. possessive
f. uncontractible copula
g. articles
h. past regular
i. third person regular
j. third person irregular
k. uncontractible auxiliary
l. contractible copula
m. contractible auxiliary

Fluency. Fluency is the ease with which a child responds or expresses himself/herself. Development sequence indicators for fluency are as follows:

The child does not respond until encouraged.
The child responds with one or more spontaneous remarks but cannot continue.
The child responds with one or more spontaneous remarks and continues with another remark or two when requested.
The child responds freely, continues when requested and is

highly productive.
The child's responses are at a , but he/she includes the teacher in a conversational manner.

Following are the specific fluency outcomes.

1. To develop a precise language of reference so that the child will be able to specify the characteristics of objects precisely and accurately without needing visual props.
2. To develop the child's ability to ask questions as a means of seeking and gaining information.
3. To develop the child's ability to verbalize eagerly and with ease.

Relevance of Syntax Development

The scientific study of language is called linguistics. Linguistics describes the state or nature of the language. It is the study of messages once they are "on the air". Descriptive linguistics includes the study of phonology, morphology, and syntax. The linguist determines the code of the message, the characteristics that distinguish one message from another.

Psycholinguistics is a combination of psychology, linguistics, and anthropology.

As a discipline it is concerned with the relation between messages and the characteristics of the persons who select and interpret them. The psycholinguist studies the encoding and decoding processes of human individuals.

According to psycholinguistics a complete description of a language would include an account of all possible phonological sequences and also a set of rules by which we can predict all the possible sentences in that language.

Although the term psycholinguistics can be found in psychological literature as early as 1912, it is still comparatively young as a descipline. It has come to prominence since 1960.

Psycholinguistics attempt to show how the individual learns linguistic systems, particularly that of his native language, and how he uses such systems in thinking and communicating. One of its major and most difficult problems is how the preschool child learns his mother tongue, with its complicated and highly sophisticated systems of sounds, words, and grammatical structures. It is also interested in vocabulary, the development of more mastery of syntactical patterns, and above all, learning to read and write.

The distinction has been drawn in psycholinguistics between "competence" and "performance" or between what is actually learned and the manifestation of that learning behavior. When the child learns his language, what is actually learned as a very complicated

set of habits or dispositions is, of course, inaccessible to direct observation. The only way we can know about them, even differentially, is through the analysis of the speaker's performance, i.e., his use of them in talking, or understanding, or even in reading and writing.

We cannot say that this competence is what the speaker "knows" about his language, for he is usually unaware of using any rules as he speaks. They are more like habits that underlie speech. Most of us would have the utmost difficulty in explaining what exactly we know that enables us to recognize and understand grammatical and meaningful sentences.

The child does not develop his language skills by blind imitation of adults, nor can his ability be accounted for in terms of any simplistic stimulus-response model. Rather the child makes an assumption about a rule or adult language (the meaning of the adult expression); he tests this assumption by putting it to work (he interprets or produces an utterance using the hypothesized rule); and he changes the rule if it proves in any way to be inadequate (if the meaning he derives in inappropriate or if the sentence form he produces is misinterpreted or corrected).

To a large extend the child's process of generating and testing his assumptions about language and modifying them on the basis of feedback may be considered the part of language ability that is innate. In order to learn about a language a child must use language.

Unless he can actually test a rule by constructing an utterance and using it in some language situation, he will be unable to discover whether a hypothesis is indeed a rule of adult language or not. It is essential that he be involved in linguistic interactions with fluent speakers so he can receive feedback relevant to the particular hypotheses that he generated.

Syntax deals with organization and relationships and does not have anything to do with semantics.

Chomsky separates syntax into 3 levels each level having a sequence of rules which generate sentences within the particular level.

1. Phrase structure level: simple-active-declarative sentences called terminal strings.
2. Transformation level: complex sentences based on terminal strings.
3. Morpology level: sequence of inflectional rules from which the actual sounds of speech are derived.

The 3 basic phrase types (noun, verb, predicate) are embedded into an infinite number of larger sentences which are generated in unpredictable ways.

Chomsky is the major theorist in psycholinguistics. He is a generative grammarian and feels the organism is innately equipped

with mechanisms which enable the individual to deal with syntax. There are an infinite number of meaningful sentences. Therefore, we must use a system allowing for the generation and transformation of language. Grammatical rules which exist must be developed within the organism due to heredity and learning.

Chomsky's basic rule for formation and transformation is as follows:

(S) sentence (reduces to) NP (noun phrase) VP (verb phrase)

NP = N (noun) + A (article) VP = V (verb) + NP (noun phrase)

(S) sentence

NP VP

A N V NP
(the) (rat) (ate) (the malt)

Menyuk's study of syntax development (1964) indicates that the child at a very early age categorizes the language he hears in terms of the attributes of a given sentence. These attributes are the rules for formulating various syntactic structures. He then proceeds to generate his unique sentences from these rules rather than just imitating those sentences he has heard. Almost all the basic structures used by adults to generate their sentences can be found in the grammar of children as young as 2 years, 10 months.

Chomsky's Theoretical Position

Human language, according to Chomsky, reflects an intellect which is qualitatively different from that of all other animals. Modern linguistic theory and especially the behavioristic theory has attempted to explain human language in terms of laws of conditioning, habits, stimulus-response learning, reinforcement schedules and generalization which Chomsky claims simply cannot adequately account for what he has referred to as the creative aspect of language use. The creative aspect of language use is the distinctively human ability to express new thoughts and to understand entirely new expressions of thought, within the framework of an "instituted language", that is, a language that is a cultural product subject to laws and principles partially unique to it and partially reflections of general properties of mind. In support of this theoretical point of Chomsky makes frequent reference to the philosoply of Descartes. He claims that 17th century Western Europe provides the traditional philosoply which stresses qualitative differences between the intellect which is capable of mastering human language and that of lesser forms. This traditional philosophy and the insights of philosophical grammarians in particular were

largely ignored by 19th and 20th century modern linguistics. The result, according to Chomsky, has been to stultify the study of the essential aspects of language and its development and to eliminate the possibility of exploring the implications which the study of language might have for shedding light on the essential properties of the human mind.

Chomsky's study of language has been conducted through a model of syntax which basically contains three elements: deep structure, transformational rules, and surface structure. Surface structure refers to "a representation of the phrases that constitute a linguistic expression and the categories to which these phrases belong". The deep structure refers to "a representation of the phrases that play a more central role in the semantic interpretation of the sentence". These two structures may be conceptualized, although somewhat simplistically, as the sound and meaning of the language. In order to transform the deep structure or meaning of a language into the surface structure or sound it is necessary to possess a system of internally represented rules or more technically, a generative grammar.

Chomsky analyzes language in terms of both surface structure and deep structure. The basic unit of surface structure is the phrase and the basic unit of deep structure is the kernel sentence. It is hypothesized that these kernel sentences in the transformational generative grammar of Chomsky are real mental structures. To illustrate how language may be analyzed in this system, consider the following three sentences:

1. John is certain that Bill will leave.
2. John is certain to leave.
3. That John will leave is certain.

In terms of surface structure, or phrase analysis; sentences 1 and 2 are similar. They are not similar, however, in terms of deep structure. Sentences 2 and 3 convey a similar meaning, are similar in deep structure, in that both sentences convey probability statements regarding the proposition of John's leaving. An analysis of the phrase structure suggests, however, that these two sentences do not have very similar surface structures.

Chomsky claims that modern linguistics and in particular behavioristic theories have concentrated almost totally on the surface structure of language and have ignored the deep structure and the difficult question of how one learns to make the varied and intricate relationships between sound and meaning. That is, how the human acquires and utilizes the rules of syntax. Chomsky argues for the existence of universals in the human mind which may be though of as biologically based structures which make it possible for the human to acquire the ability to use language creatively. These biological structures are species-specific and provide the basis for what Chomsky and his followers have called a "language acquisition device" (LAD). The language acquisition device receives as input the kind of data which is available to the child in learning his first language and produces as output the generative grammar of that language. This output is the internally represented grammar which allows the child to relate deep and surface structure,

allows him to transform meaning into sound and into meaning and hence to master the language.

Measuring Syntax Development

The following literature discusses the appropriate instruments to measure the effectiveness of the identified environmental conditions with young children.

The 2 year old child is recalcitrant, and one cannot expect to obtain from him the syntactical structures that were used in a measure with 4 and 5 year old children by Brown and Bellugi (1964). Therefore, to assess the syntax structures of the very young child, one must write grammars on the child's observed speech.

Although a description of the syntactic structures in a child's language does not give a total account of his language development, it can go beyond the quantitative measure of percentages and proportion of adult usage provided in previous studies of children's grammar. It can encompass the interrelationships of various measures of language development and describe their interdependencies (Menyuk, 1961). It may provide a "hypothesis concerning the specific nature of the innate intellectual equipment of the child" (Chomsky, 19, p. 36).

Lee's Developmental sentence types. Lee (1966) proposed a method of analyzing language samples that was based upon the work of Braine (1963) Brown and Bellugi (1964), and Chomsky (1957). The Developmental Sentence Types model was an attempt to illustrate the progression that the child might go through from his early two word combinations to the use of the noun phrase, verb phrase, and other grammatical forms as independent elements or kernel sentences from which transformations will be derived.

Lee"s explanatory model of grammar is analogous to a categorization theory of learning. It is hypothesized by linguists that the attributes of a given category are memorized and the child can then produce new instances of the category.

By using this instrument one can:

1. Identify the grammatical categories of the population's language.
2. Determine which categories are used more consistently then others.
3. Determine which categories are acquired at an earlier or later age.

In a study with Negro preschool children, language samples were analyzed using Lee's Development Sentence Types model (Lee, 1966). The transformations and restricted forms of these children were then compared with the results that Menyuk (1961) obtained from middleclass preschoolers. Lee's Developmental Sentence Types was found to be an adequate framework for analyzing language samples of this type, since it was possible to classify all utterances of the Head Start children within the Developmental Sentence Types model. Lee's Developmental Sentences Types can measure a dialect

of standard English to enable study of the language development of the ghetto child, Appalachian child, or bilingual child. The utterances used by the Head Start population were found to be different from those used by middleclass children. Although the Negro economically impoverished child has many forms in his language that resemble standary English, results indicate that he has a highly developed, highly structured linguistic system that is different from that of his middle class white agemate. The difference between the Head Start children and the kindergarden children did not appear to be one of developmental level, but rather one involving the nature of the response to be categorized as transformations or as restricted forms.

Language studies of the economically deprived child had used as their criterion of language development, measurements based on the standard dialect because of an implicit assumption that non-standard dialect represents, at most, mere low-level modification of standard English. Lee's Developmental Sentence Types can measure a dialect of standard English to enable study of the language development of the ghetto child, Appalachian child, or bilingual child.

LEE'S DEVELOPMENTAL SENTENCE TYPES

Level I Two Word Combinations

2 Word Noun Phrases

Article:
a car, the car
Possessive:
Daddy car, my car
Quantifier:
more car, two car
Adjective:
big car, dirty car

2 Word Designative

Locator:
there car, here car
Demonstrator:
this car, that car, dat lion this a car, that's a car
Identifier:
it car, it's a car, 'sa car, 's car

2 Word Predicative

Adjective:
car broken
light off
Locator:
car there, car here

2 Word Verbal

Verb + noun:
see car, push it
Verb & particle:
go up, fall down, walks in
Noun & Verb:
I see
Mommy do

2 Word Fragments

Phrase Structure:
2 Word Locator:
up there
Prep. Phrase:
to office, by the wall
Transformational Negative:
not car, not ride
Conjunction:
and car

2 Word Stereotyped Ph

don't cry
be careful
I dunno
I 'onna

Level II Noun Phrases

Noun Phrase

(art. & poss.) (noun) + (adj.) N

my big car
no more car
the other big car
no more baby

then let tails

Level III Constructions

Noun Phrases

incorporated into constructions

Designative Construction

locator demonstrator + NP
identifier
there the big car
that my car
it a car
itsa big car
'da dirty car

Predicative Construction

adj. loc. NP + NP PP

the car broken
that car in garage
the car there

Verb Phrase Construction

V+(part)+ NP PP loc adv

put away the car
ride in a car
put car up

Phrase Structure Fragments

incorporated into Constructions

Stereotyped Constructions

an' up an' do
go round and
listen to tic
to reach the top

		dat about two beans	David a good boy, a baby in a crib	take car again open dat door	
Level IV Kernel sentences	Designative Sentence locator demonstrator identified + is, 's, & NP there's the car this is a big car it is a car it's my car dat is duk ovah class	Predicative Sentence NP+ie+adj "s PP loc NP the car is broken that car's in garage my car's there David is a good boy his name is Wesley	Actor-Action Sentence NP & VP I see n car me ride in car Mommy put car there me take car again a lady talk to duh man		Stereotyped Constructions incorporated in sentences
Level V Successive levels emerging	Interrogative Is that a car "We" question: where is the car who is there	Negative the car is not broken Conjunction the car and the truck are broken dat's not me dat's Deborah	"Do" & Negative I don't see a car Infinitival Complement: I wanna take a car. Debby didn' know it was dark time	Transformational Fragments incorporates into transformations "an tiger gonna house an tiger got all burned up"	Stereotyped Constructions I dunno that one

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Menyuk's Syntax Scale. The Chomsky model considers the grammar as having a tripartite structure; namely a phrase structure level, a transformation level and a morphology level. Each of the tree levels of the grammar has a sequence of rules which generate the sentences within the level. Initially, simple-active-declarative sentences are derived at the level of phrase structure. Chomsky calls these sentences terminal strings and they form the basis for all other sentences. The more complex sentences are formulated by the sequence of rules at the second level of the grammar, which Chomsky has termed transformational rules. The transformational rules are of two kinds: optional and obligatory. The optional rules are chosen by the speaker. He can choose to formulate apositive sentence, a negative sentence an imperative sentence, etc. Once having a form there is a set of obligatory rules which must be followed to produce sentences which will be accepted by the listener as grammatical. The transformational rules carry strings with phrase structure into new strings to which the rules at the third level can apply. At the third level of the grammar there is a sequence of morphophonemic or inflectional rules from which the actual sounds of speech are derived. Chomsky's model describes these rules at each level, and tries to explain how a grammar is produced on the basis of these rules.

In the above study the basic structures which generated all the sentences in the total language sample could be described with the framework of the Chomsky model. A children's grammar was written which includes those structures found in both children's and adults' grammar and those structures which are peculiar to the children's grammar. Thus, it is a self-contained system describing a stage of development of children's grammar.

All the basic structures used by adults to generate their sentences can be found in the grammar of the nursey school children. Age increased the ability to use the basic structures in an additive manner and also increased the total sentence output in like stimuli situations. In comparing the number of children in the nursery school group and in the first grade group who used the structures, it was found that most of the structures are acquired at an early age and are used consistently.

The following transformational model describes the rules for generating a sentence from the stage at which a simple-active-declarative sentence is formulated from the parts of speech (phrase structure level) to the level at which sentence is changed to other types such as the negative, passive, imperative, etc. (transfor mational level) to the final level at which inflectional rules are applied (morphology level)

A transformational model of syntactic structures was used to describe children's grammar from under 3 years of age to over 7 years as a self-contained system and to indicate developmental trends.

Phrase Structure	Examples	Frequency Rates
1. Noun phrase		
2. Verb phrase		
3. Adverbial phrase		
4. Prepositional phrase	for baby	
5. Article	a, the	
6. Noun	man, ball	
7. Verb	hit	
8. Preposition	of, for, in, etc.	
Simple Transformations		
1. Passive	He was tied up by the man.	
2. Negation	I am not.	
3. Question	Is he sleeping?	
4. Contraction	He'll choke.	
5. Inversion	Now I have kittens.	
6. Relative question	What is that?	
7. Imperative	Don't use my brushes.	
8. Pronomicalization	There isn't any more.	
9. Separation	He took it off.	
10. Auxiliary verb		
a. be	He is not going to the movies.	
b. have	I've already been there.	
c. do		
11. Got	I've got a book.	
12. Do	I did read the book.	
13. Possessive	I'm writing daddy's name.	
14. Reflective	I cut myself.	
Generalized Transformations	(These are derived from 2 kernel sentences.)	
15. Conjunction (and, but, so)	They will be over here and momma will be over there.	
16. Conjunction delection	I see lipstick and a comb.	
17. Conditional - if	I'll give it to you if you need it.	
18. So	He saw him so he hit him.	
19. Casual	He won't eat the grass because they will cry.	
20. Pronoun in conjunction	Blacky say Tippy and he was mad.	
21. Adjective	I have a pink dog.	
22. Relative clause	I don't know what he's doing.	
23. Complement		
a. infinitival	I want to play.	
b. participial	I like singing.	
24. Interation	You have to clean clothes to make them clean.	
25. Nominalization	She does the shopping and cooking and baking.	
26. Nominal compound	The baby carriage is here.	
27. Adverb		

Restricted Forms	Frequency Rate
1. Verb phrase	
a) omission	
b) redundancy	
c) substitution	
2. Noun phrase	
a) omission	
b) redundancy	
3. Preposition	
a) omission	
b) redundancy	
c) substitution	
4. Article	
a) omission	
b) redundancy	
c) substitution	
5. Particle	
a) omission	
b) redundancy	
6. Inversion restrictions	
a) subject-object	
b) verb number	
7. Double Negation	
8. Contraction deletion	
9. Question	
10. There substitution	
11. Separation	
12. Reflesive 3rd person	
13. Tense restriction	
14. Adjective restriction	
15. Relative pr. restriction	
16. Pronoun restriction	
17. Verb form	
a) omission	
b) redundancy	
c) substitution	
18. Noun form	
a) omission	
b) redundancy	
c) substitution	
19. Possessive	
20. Pronoun first person	
21. Adverb restriction	
22. Auxiliary restriction	
23. Conjunction restriction	
24. Auxiliary omission	
25. Possessive restriction	
26. Because of so substitution	
27. If omission	

UVa Syntax measure. This syntax measure based on Menyuk's scale was developed by Mitch Bowman and Anna Zapatoczny, graduate students in Early Childhood Education at UVa, in an attempt to elicit the identified transformations from the child. The stimulus around which the questions were asked was a fish in a bowl. Four alternative questions are given to elicit the specific transformation. This in in a pilot stage and is sure to have some revisions.

SYNTAX MEASURE

(Based on scale developed by Paula Menyuk)

Questions adult asks the child.	Typical Responses by a Four Year Old Child to the UVa Syntax Measure
Noun Phrases	**Noun Phrases**
1. "What do you see here?" (point to fish if necessary)	1. A fish.
2. "What color is the fish?"	2. Orange.
3. "Does the fish have eyes?"	3. Yep.
4. "How many eyes does he have?"	4. Two.
Verb Phrases	**Verb Phrases**
1. "What is the fish doing?"	1. He's swimming.
2. "What is the fish doing with his mouth?"	2. He's opening and closing it.
3. "What is the fish doing with his tail?"	3. He's wiggling it back and forth.
4. "What else is he doing?"	4. It's looking for food.
Prepositions	**Prepositions**
1. "Where is the fish?"	1. Right there. Right there In the fish bowl.
2. "Where is the water?"	2. In the fish bowl.
3. "Where are the fish's eyes?"	3. On the side of it's face.
4. "Where is the bowl?"	4. Right here, in the middle of the table.
Passive	**Passive**
1. "How was the fish put into the bowl?"	1. They - they get it with the net and they dump it from a big fish bowl and they dump it.
2. "How was the gravel put into the bowl?"	2. They get a whole box full - get it in - drop it in.
3. "How was the marble put into the bowl?"	3. They put glue on it - stick it in there - glue on it stick it in there.
4. "How was the fish bought?"	4. From the fish store.
Negative	**Negative**
1. "Is the fish on the floor?"	1. No.
2. "Where did you buy this fish?"	2. I didn't buy it.

Adult Questions	Child's Responses
3. "When did you feed this fish?"	3. I didn't...
4. "How did you put the marble in the bowl?"	4. I didn't...
Questions and Relative Questions	**Questions and Relative Questions**
1. "What would you like to ask me about the fish?"	1. How they move?
2. "What else would you like to ask me about the fish?"	2. How did they put this big thing in there?
3. "What else would you like to ask me?"	3. You mean these are your fish?
Contractions and Causal (Because, if, so)	**Contraction and Causal (Because, if, so)**
1. "What will happen if I hold the fish in my hand? "Why?"	1. He would die. Because he'll get cold.
2. "If I do not feed the fish, how will the fish feel?" "Why?"	2. Sad. Because it would be hungry.
3. "If I take the water out of the bowl, what will the fish do?" "Why?"	3. Die. Because won't have any water.
4. "If I drop the bowl, what will happen?" "Why?"	4. They'll die and the glass - and this will break. Because the air will be cold.
Imperative	**Imperative**
"Now I want you to talk to the fish."	
1. "Tell the fish to swim through the tunnel."	1. Swim through that tunnel.
2. "Here's some food for the fish. Put it in the water and tell the fish to eat it."	2. Eat that food.
3. "Tell the fish to move the marble."	3. Move those marbles.
4. "Tell the fish to swim faster."	4. Swim faster.
"Got"	**Got**
1. "Tell me how you got your shoes."	1. I bought them at the shoe store with mommie.
2. "Tell me how you got your shirt (dress)."	2. My mommie bought some - something like this and she made it.

3. (Give child a marble,) "Tell me about what you have in your hand."	3. A marble.
4. (Give child the fish food.) "Tell me about what you have in your hand."	4. Fish food.
"Have" (Auxiliary verb)	Have
1. (Put marble in bowl) "Tell me what I have done."	1. You have put a marble in the fish bowl.
2. "Put your finger in the water." "Tell me what you have done."	2. I have put my finger in the fish bowl.
3. "Put your hands on your head." "Tell me what you have done."	3. I have put my hands on my head.
4. (Pick up the fish bowl.) "Tell me what I have done."	4. You've picked up the fish bowl and put it back down.
Separation	Separation
1. (Give child a marble.) "Put the marble in the bowl." "What did you do?"	1. I put it in the fish bowl.
2. (Give child another marble.) "Put the marble in my hand." What did you do with the marble?"	2. I gave it to you.
3. (Give child the marble again.) "Hold the marble high in the air."	3. I held it high up in the air.
4. "Put the marble on the table." "What did you do with the marble?"	4. I put it on the table.
Past Tense	Past Tense
1. "Go and open the door." "What did you do?"	1. I opened the door and closed it.
2. "Now run and touch the wall." "What did you do?"	2. Touched the wall.
3. "Now touch your nose." "What did you do?"	3. Touched my nose.
4. "Now jump up and down." "What did you do?"	4. Jump up and down. Jumped up and down.
Possessive	Possessive
1. "Whose pencil is this?"	1. Yours.

2. "Whose shirt (dress) is this?"	2. Mine.
3. (Show picture No. 1) "Whose pigs are these?'	3. Hers.
4. (Show picture No. 2) "Whose bone is this?"	4. The dog's.
Reflexive	Reflexive
1. "Hit yourself." "What did you do?"	1. Hit myself-three times.
2. "Now I'll hit myself." "What did I do?"	2. You hit yourself on the arm.
3. "Touch yourself." "What did you do?"	3. Touch myself.
4. "Now I'll touch myself." "What did I do?"	4. Touched myself.
Conjunction	Conjunction
1. (Show marble and pencil.) "Tell me about these."	1. The marble can roll and the pencil can write.
2. (Show paper and spoon.) "Tell me about these."	2. The spoon can dig and you can have a piece of paper and write.
3. (Show sock and belt.) "Tell me about these."	3. You can wear sock and you can put a belt in that.
4. (Show scissors and book.) "Tell me about these."	4. You can cut with this and we can look in this.
Pronoun in conjunction	Pronoun in Conjunction
1. (Show picture No. 3.) "Tell me about this picture."	1. They're playing baseball. They're playing baseball and the little girl is going to get the ball.
2. (Show picture No. 4.) "Tell me about this picture."	2. The hat flew away. And she's trying to get it.
3. (Show picture No. 5.) "Tell me about this picture."	3. They're giving her some place stuff cause her foot is broken.
4. (Show picture No. 6.) "Tell me about this picture."	4. He's going home. And the puppy's going home.
Adjective	Adjective
1. "Tell me about your shoes."	1. Well, they're new and

	my brother polishes them. And see they use to be all grumpy.
2. "Tell me about my dress (shirt)."	2. You buyed it. Good.
3. "Tell me about the gravel in the fish bowl."	3. Orange, blue, white and purple.
4. "Tell me about your shirt (dress)."	4. It's new.
Adverb	Adverb
1. "Run across the room." "Now tell me how you were running."	1. I was running with my feet.
2. "Clap your hands together as hard as you can." "Now tell me how you were clapping."	2. Hard.
3. "Jump up and down." "Now tell me how you were jumping."	3. Hard.
4. "Shake your head." "Now tell me how you were shaking your head."	4. Fast.
Complement - Infinitive	Complement - Infinitive
1. "If you could do anything, what would you want to do?"	1. I would want to swim in the water.
2. "What else do you want to do?"	2. I would want to pat my cat.
3. "What else do you want to do?"	3. I would want to lay down and watch TV all-day.
4. "What else do you want to do?"	4. Have some candy and a popcycle.
Complement - Participle	Complement - Participle
1. "What is it fun doing?"	1. Swimming.
2. "What else is it fun doing?"	2. Eating and sitting down.
3. "What else is it fun doing?"	3. Play dolls.
4. "What else is it fun doing?"	4.
Did (Auxiliary verb)	Did (Auxiliary verb)
1. "Ask the fish if it ate its food."	1. Did you eat your food fishes?
2. "Ask the fish if it swam through the tunnel."	2. Did you swim through the tunnel?

3. "Ask the fish if it slept last night."

4. "Ask the fish if it went swimming this morning.

3. Did you sleep last night?

4. Did you swimming this morning.

Other syntax measures.

1. Wechsler Intelligence Scale (WISC) Item Picture Arrangement: child is asked to tell in his own words the picture story he arranged; his response shows his skill in word finding and sentence building - one can detect any deterioration of articulation during contextual speech.

2. Tell a Simple Story (Three Bears, Red Riding Hood, etc.) If a child cannot tell a story spontaneously, the examiner tells the child a simple story and asks him to retell it. This measures child's use of language in connected speech: articulation, vocabulary, sentence structure, word variety, organization of thought, memory for significant detail.

3. Northwestern Syntax Screening Test. (NSST) THe NSST is a quick screening device to make an estimate of syntactic development. It can isolate those children between 3 and 8 years of age who are sufficiently deviant in syntactic development to warrnat further analysis. The NSST measures both receptive and expressive use of syntactic forms, using identical linguistic structures in both parts of the test.
This test is copyrighted and obtainable from the Northwestern University Press.

4. Receptive, Expressive and Phonetic Language Scale. (O'Asare and John 1961)

   The R-E-P scale allows the observation of receptive, expressive, and phonetic skills for children 6 weeks to 68 months. It combines interviews with the mother and direct observation of the child.

5. Syntaxtical Relations Test for Deaf Children (Ray, Schein, and Frisina 1954). This test is designed to measure the child's grasp of syntax. It is designed to be used with children 3 to 7 years of age. Selecting the correct response depends upon recognizing the part of speech that is missing.

6. Verbal language development Scale (Mechane,) This is a checklist scale later from the Vineland Maturity Scale.

7. Berko's Morphology Measure. There are still very few measures for determining a child's application of syntactical rules orally. In 1958 Jean Berko developed a procedure to evaluate a child's knowledge of grammatical rules (Anisfeld and Tueker 1973). She determined this could be done by observing any generalizations of these rules to nonsense syllables. She devised a method for eliciting the child's productive control of various inflections--plurals, present progressive, past tense, possessive, and third person singular--by presenting him with nonsense words in contexts requiring inflections. She chose nonsense syllables because she felt that true, internalized generalizations would be tested rather than memorized or rote inflectional forms.

   There are a number of criticisms of Berko's study: 1--it does not provide a very representative sample of the whole range of the child's usage; 2--performance is dependent on the child's knowledge of certain words and ability to "read" correctly particular pictured

referenced situations; 3--it seems to represent much too low a success level; and 4--it tested only productive control of rules and not receptive control. In general, though, Berko's inventive approach to measuring a child's knowledge of morphological rules is a classic, and a model upon which methods, yet to be refined, can be based.

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Step II Conditions in the Environment to Develop Syntax in Young Children

Situational Variables

General Conditions

Specific Conditions for the development of

a. Identified grammatical patterns of Standard English

b. Ability to ask questions as a means of seeking

c. Ability to verbalize eagerly, and with ease: fluency

CONDITIONS IN THE ENVIROMENT TO DEVELOP SYNTAX IN YOUNG CHILDREN

Situational Variables Relating to Syntax

The relative contributions of heredity and environment to the development of language is an unresolved question. Certain theorists, e.g., Lenneberg and Chomsky have advocated a strongly environmentalistic position, e.g., Mowrer and Skinner. Those with a predominantly biological orientation include Lenneberg who has claimed that language development has a rather specific biological foundation. The child begins to speak when he is at a certain maturational level, has attained a given stage of maturation, and training does not influence the general point in a child's development at which language use is begun. In support of the biological viewpoint, Lenneberg (19) points out that there is a remarkable degree of correlation between measures of motor development and language development. This correlation holds for both normal and retarded populations. Lenneberg further states that language begins when various measures of central nervous system maturity, such as brain weight, have achieved approximately 65 percent of their mature values. In his studies of language development in many countries he has found that the rate of speech development varies extremely little among these diverse cultures. A study by Greenberg (1963) of 30 different cultures found that initial phonology was not different among the various cultures studied. A further line of supporting evidence comes from studies which compare the language development of children with deaf parents and children with normally hearing parents. During early infancy there appears to be almost no difference in the sounds emitted by the children from these two distinctly different hearing and speaking environments. Also, the children born to congenitally deaf parents began to speak at approximately the same age as the children from normally hearing parents and the stages in language development were the same for both groups of children. Support for the biological basis of language development has also come form studies of homozygous and heterozyhous twins and from studies involving injury to the brain at various ages. Lenneberg further claims that language is a species-specific phenomenon and that attempts to demonstrate language acquisition in infra-human animals has not been successful. Reported successes have been the result of an inadequate definition of language.

A similar biological point of view regarding language development is espoused by the linguist Chomsky. Chomsky also views language as a species-specific phenomenon, suggesting that the ability to use language is the very essence of humanity. Chomsky has focused his attention primarily on the acquisition of grammatical rules. He postulates that in order for the child to be able to acquire language he must discover the underlying system of grammatical rules. Chomsky suggests that all humans possess an innate language capacity which might be called a language acquisition device. Since the child actually hears only a limited number of sentences and is able to produce an infinite number by applying various rules of syntax, Chomsky suggests that the language acquisition device permits the child to extract the regularities from the sentences he hears and incorporate these

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regularities as a system of rules. Once he has acquired this system of rules, the child can produce and understand sentences which he has never heard before.

The biological viewpoint of language acquisition postulates that the most active mechanisms in the development of language are the innate biological structures of the organism. The child's language environment according to Lenneberg and Chomsky plays a rather passive role. The behaviorist position suggests a more active role for the enviroment. Mowrer, (19), for example, has used the principles of imitation and reinforcement to explain language acquisition. According to Mowrer, language is acquired initially by the child associating the sounds of the human voice with pleasurable, need-satisfying activities such as being fed. Due to this pleasant association the child's own vocalizations are pleasurable and tend to be repeated. The adults in the child's environment also reinforce babbling which resembles adult speech. The wide variety of a child's speech is accounted for by the process of generalization. Linguists have generally been unenthusiastic about learning theory interpretations of language acquisition. Particular criticism has focused on the generalization issue. It has been pointed out, for example, by Brown, Cazden and Bellugi that children acquire and utilize a wide variety of syntactic transformations for which there has been apparently no reinforcement. For the young child, reinforcement is generally based on the semantic content of vocalizations and not on the syntax. This condition provides little basis for generalization.

Much of the current research which relates cultural, social variables to language acquisition has been stimulated by the work of Basil Bernstein, a sociolinguist. Berstein observed that there were striking differences between the speech of working class and middle class children in London. The difference was in the type of code which was employed in speech. Bernstein (19) suggested two general types of codes, restricted and elaborated. Restricted code communication is characterized by context-bound, particularistic structures and meaning. Elaborated code communication, on the other hand, is less context-bound, formal syntactic rules are employed, a relatively differentiated vocabulary is utilized and the meanings of phrases are universalistic, that is they are understood by listeners regardless of the listeners particular background. These code differences have been explored in the United States population by a number of researches. In general research has concentrated on lower class (particularly black) and middle-class speech. One of the most frequently cited studies is that of Hess and Shipman (1965). Hess and Shipman were interested specifically in examining the question of what is cultural deprivation and how does it act to depress the cognitive resources of children. In order to study this question Hess and Shipman engaged approximately 160 black mothers and their 4-year-old children in a series of tasks and interviews. Striking differences were found in the use of language between the mothers and children in the various SES levels studied. Relative to lower class mothers, mothers in the upper middle-class used significantly more words in describing pictures to their children, used more complex syntactic structures, used more

abstract words, more complex verbs and a greater variety of modifiers. It was concluded that lower class mothers generally employed a more restricted linguistic code.

The Hess and Shipman study also studied another variable which Bernstein has suggested in related to the use of restricted and elaborated codes and relates to subsequent problem-solving ability. Hess and Shipman found that there were differences between classes in the relative proportion of person-oriented and status-oriented messages. In a status-oriented message there is an appeal to role prescriptions. For example, "Girls don't do that" or "Because I said so, that's why". A person-oriented message, however, includes communication which is based on the attributes of the individual and elaborates causes and consequences, thus trying a particular message to an individual and a social context. It was found that the upper-middle class mothers used a far greater number of person-oriented messages than did the lower-class mothers. The importance of this finding for language development is that the person-oriented messages provide a better model for the social use of language. The middle-class child is likely to be exposed to a language environment in which language is used to signal out his individuality and provide both antecedent and consequent situational ties. The lower-class child appears to be exposed to a vastly different model. Language for the lower class child is more likely to be viewed as a restatement of status differences, much less personal, and without situational ties.

Bernstein's work was originally published in the late 1950's. In a 1970 article Berstein further elaborated his theory of codes and addressed himself to some of the misuses of his earlier work. It appears that there was some confusion on the issue of restricted code. Several authors equated restricted with linguistically deprived or nonverbal. In the 1970 article Bernstein pointed out that such an interpretation is inadequate. He suggests that it is inaccurate to claim that middle-class people use an elaborated code and lower class people use a restricted code. The difference is not in the possession of the code but rather in what situations various codes are used. It appears to Bernstein that major differences in choice of code occur in such child-rearing situations as moral education, discipline and expression of feeling. Whereas middle-class parents are more likely to discuss such matters in the context of an elaborated code, lower-class parents are more likely to use the restricted code. (As an aside, this difference was graphically depicted in a recent television program which describes the lives and life styles of a blue-collar family and white-collar family in the United States. The blue-collar father came home from work one evening obviously tired, and sat down to dinner with his wife and children. As soon as he sat down he said "shut up" and that ended the conversation. The white collar worker and his family were driving to the weekend cottage one Friday afternoon and the father said "I have really had a hectic week. I've been under pressure all week and I want to be pampered, so please keep the noise down". The situations and messages were parallel but the differences in code, the differences in the social use of language, were obvious.) The situational differences in language

use was also demonstrated in a study in which children of different social classes were given two topics about which they were to write letters. There were no differences in syntax and vocabulary attributable to class differences in the formal writing assignment (a business letter) but when the topic was informal the class differences were apparent.

The situational differences in language use also appears to bring together some of the differences among biologists, linguists and behaviorists. The critical feature appears to be a need to distinguish between language competence and language performance. Several authors have pointed out this distinction, including Lenneberg and Menyuk. In a review by Ossex, (19), the point is made that there are four kinds of problems which a theory of language development must account for: 1) the development of prelinguistic babbling; 2) the acquisition of basic language structures; 3) the acquisition of elaborated language sequences; 4) the acquisition of different modes of communication. Osser suggests that social or cultural factors appear to be stongly implicated in the last two areas of development, and play a lesser role in the development of 1 and 2. It might also be claimed that as one progresses through the four areas, the problem of divorcing competence from performance becomes progressively more difficult.

General Conditions

General conditions in the environment that bring about the development of syntax are the previously learned ones of extension, elaboration, expansion of thought, and encoding techniques.

1. Extension - when the learning facilitator says more completely what the child had tried to say, but keeping his words as close to the child's own words as possible.

2. Elaboration - giving the child a new word when his sentence is being extended or when describing something to him.

3. Expansion of Thought - where the language facilitator deliberately models the correct syntax following a child's immature syntactical structure. She then encourages the child to use it by asking him a question, the response to which demands use of the structure.

4. Encoding or questioning strategies particularly those calling for open ended responses such as:

   -attention seeking questions, hypothesis statements and attention seeking statements.

5. Imitation can be used with the directive process.

Following are example learning environments and/or experiences that are designed to bring about the syntax development outcomes of

1. the ability to express oneself using the identified grammatical patterns of standard English;

2. to develop a precise language of reference so that the child will be able to specify the characteristics of objects precisely and accurately without needing visual props;

3. the ability to ask questions as a means of seeking and gaining information;

4. ability to verbalize eagerly and with ease.

CONDITIONS FOR DEVELOPING

THE CHILD'S ABILITY TO EXPRESS HIMSELF

USING THE IDENTIFIED GRAMMATICAL PATTERNS OF STANDARD ENGLISH.

00642

ACTIVITY: Popping Corn

Learner Outcome: To develop the child's ability to express himself using the identified grammatical patterns of Standard English

Conditions:

Learner Characteristics:

Situational Variables:

Teaching Strategy: Directive/Developmental

Content: Popcorn popper (clear top)
popcorn
oil
salt

Make the popcorn with child, conversing all the while in an effort to elicit the desired syntactical patterns.
Example:
a) Noun Phrases:
What do you think is happening to the oil inside the popper?

What can we put on the popcorn to make it taste better?

What would you like to drink with your popcorn?

Evaluation:

Activity: Gerbel

Learner Outcome: To develop the child's ability to express himself using the identified grammatical patterns of standard English.

Conditions:

Learner Characteristics:

Situational Variables:

Instructional Strategy: Questioning strategy and learning facilitator's feedback to child's questions and responses. The stimulus around which the questions will be asked are two gerbils.

Noun Phrases:
1. What do you see here?
2. What color is the gerbil?
3. Does he have eyes?
4. How many gerbils do you see?

Verb Phrases:
1. What is the gerbil doing?
2. What is he doing with his nose?
3. What is he doing with his tail?
4. What else is he doing?

Preposition:
1. Where is the gerbil?
2. Where is teh other gerbil?
3. Where is his eyes?
4. Where is the gerbil's house?

Passive:
1. How would you feed the gerbil?
2. How was the gerbil brought into the room?
3. Is the gerbil on the floor?

Questions and Relative Questions:
1. What would you like to ask me about the gerbils?

Contractions and Causal:
1. What will happen if I hold the gerbil in my hand?
2. If I don't feed the gerbil, how will he feel? Why?

Imperative: Now I want you to talk to the gerbils.
1. Tell the gerbil to come over here.
2. Here is some food for the gerbils. Put in here in the bowl and tell the

gerbil to eat it.
3. Tell the gerbil to play with you.
4. Tell the gerbil to get on your hand.

Got:
1. Give the child the gerbil food - "Tell me about what you have in your hand."
2. Give the child the gerbil - "Now tell me about what you have in your hand."

Have:
1. Pick up the gerbil. "What have I done?"
2. Rub the gerbil. "What have I done?"
3. Pick up the gerbil's house. "What have I done?"

Separation:
1. "Put the food on the table" - "What did you do?"
2. "Put the food in the bag" - "What did you do with the food?"

Past Tense:
1. Go and get the gerbil. What did you do?
2. Rub the gerbil. What did you do?

Possessive:
1. Whose house is this?
2. Whose food is this?
3. Whose hand is this?

Reflexive:
1. Touch the gerbil. What did you do?
2. Touch yourself. What did you do?
3. Now I'll touch myself. What did I do?

Conjunction:
1. (Show food and house.) Tell me about these.

Pronoun in conjunction:
1. Tell me about this gerbil.
2. Tell me about this gerbil.

Adjective:
1. Tell me about your gerbil.
2. Tell me about your pets at home.

Adverb:
1. Put the gerbil in the box very gently. How did you put the gerbil in the box?

Did:
1. Ask the gerbil if it ate its food.
2. Ask the gerbil if it ran across the floor.
3. Ask the gerbil if it likes you.
4. Ask the gerbil if it wants to visit its friend in the box.

Content. the gerbil

Activity: Making Milk Shakes

Learner Outcome: To develop the children's ability to express themselves using the following syntactical structures, as well as to be able to explain an event that has happened using the structures.

Conditions: A) Learner Characteristics:

B) Situational Variables:

C) Teaching Strategy: Developmental extension, elaboration, expansion, and questioning strategies are used as the event happens in front of the children, ans as they participate in it, to elicit the following syntactical structures: (examples of questions to be asked)

Noun Phrases:
1. What is this? (point to ingredients singly)
2. What flavor is the ice cream? The jam?
3. Is the ice cream hot or cold, soft or hard?

Verb Phrases:
1. What are we doing with the ice cream. (as someone takes it from the carton and puts it in the blender)
2. What will happen to the milk and ice cream when the blender is turned on?
3. What should we do with the blender (plug it in)?
4. Where should we put the blender (on the floor)? Why? [also prep. phrase]

Preposition:
1. Where am I going to put the vanilla? (into the blender)
2. You get ice cream from milk. Where does milk come from? How do we get chocolate milk?
3. Where are the strawberries (in the jar)? Where do we find strawberries?
4. (Child puts in ice cream. Another child puts in milk) Now where is child pouring the milk? (over, around the ice cream).

Causal:
1. What will happen when the strawberry jam is added?
2. What will happen when the blender is turned on?
3. What do people do to milk to get ice cream? What do they do to strawberries to get jam?

4. What happens when ice cream gets hot?

Concluding Questions:

1. Can anyone describe the taste of milkshake (smooth, soft, cold, strawberry)?
2. Can anyone expain how we made the milkshake?
3. How could we make a chocolate instead of a strawberry milkshake (banana, vanilla)?

D) Materials: blender, strawberry jam, vanilla, milk, vanilla ice cream, cups.

E) Evaluation:

00047

Activity: Watering the Plants

Learner Outcome: (I) To guide the child from his present syntax pattern to more complex syntax patterns.

(II) To encourage verbalization and questioning as a means of expressing and gaining information.

Conditions:

Learner Characteristics:

Situational Variables:

Instructional Strategy: (Developmental) Using questioning strategies and appropriate feedback techniques, discuss the watering of the plants set up in the class.

Syntax Patterns:

Noun Phrases: "What do you see here?" (Cucumber plants)
"What color are they?"
"What are these?" (They are leaves.)
"What color are they?:

Prepositions: "What do we do with this?" (Point to water dispenser)
"Where did you get the water?"
"Where did the water go?"
"Then what happens?"

Verb Phrases: "What are you doing?" (Watering the plants?)
"Where are you going?" (To get water)
"What is the water doing?"

Passive: "How would you water the plant?"
"How was the plant put in the tray?"
"How could you feed the plant?"

Causal: "What would happen if the plant didn't get water?"
"What would happen if we gave it too much water?"
"What would happen if no dirt were around it?"

Imperative: "Bring the water here."
"Sit in this chair."
"Tell me what your doing."

Possessive: "Whose plants are these?"

"Whose water is this?"
"Whose hand is this?"

Reflexive: "Touch the leaves. What did you do?"
"Pour the water. What did you do?"
"Touch yourself. What did you do?"

Negative: Is the water on the floor?
Where did you buy this water?
Where did you buy these plants?

Got: Give the child a water dispenser. - "Tell me about what you have in your hand."
Give the child a plant tray. - "Now tell me about what you have in your hand."

Evaluation:

Activity:

Learner Outcome: To develop the child's ability to express himself using the identified grammatical patterns of Standard English; specifically the use of the present progressive and the past perfect.

Conditions:

Learner Characteristics:

Situational Variables:

Teaching Strategy: Developmental
The group is seated around a small classroom table and chair. The teacher takes the first turn. She gets up from the group, goes to the shelf, gets out some work, and carries it back to the table. She sits down and while seated goes through the motions of working, repeating "I am working," all the while. She then gets up and takes the work back to the shelf repeating, "I have worked," while doing so. Each child in the group may take a turn. All the children are encouraged to repeat the two sentences with the child who is doing the activity.
After everyone who wants a turn has had a turn, the teacher then asks for other ideas of things to do.

Content: Whatever materials the teacher's using.

Evaluation:

Activity:

Learner Outcome: Developmental; Understanding the causal relationship between two events during "because".

Conditions:

Learner Characteristics:

Situational Variables:

Teaching Strategy: Directive

Procedure:

1. Make the statement: "Ellen wears a dress because she is a girl." Then ask, "Why does Ellen wear a dress?" Have the student respond in a complete sentence: "Ellen wears a dress because she is a girl." Do this to establish the causal relationship between the two events using the connecting word "because".

   Susan is laughing because she is happy.

   The windows are open because it is hot.

   People wear coats because it is cold.

   Airplanes fly because they have wings.

   We use unbrellas because it is raining.

2. Leave the sentence openeded and have the student supply the ending after the "because".

   The man drinks because...(he is thirsty).

   The child goes to bed because...(he is sleepy).

   I eat because...(I am hungary).

   He closed the window because...(it was cold).

   Mothers wash clothes because...(they get dirty).

   Turn on the light because...(it is dark).

3. Ask the child questions which require a causal response. Encourage the child to answer in full sentences.

   Why can't people fly?

   Why are lions kept in cages?

Why do cars have lights?

Why don't we drink soup with a fork?

Why do people sleep?

Why shouldn't children play with knives?

4. Present some of the following incongruities. Have the student identify the incongruous of the sentence and correct it.

We take medicine because we are healthy.

The boy eats because he is thirsty.

The man sleeps because he is awake.

The girl uses an unbrella because it is sunny.

Content: The preceeding script.

Evaluation:

Activity:

Learner Outcome: Syntax Developmental Skills. The child will be able to express himself using Standard English as he tells a story of a given picture.

a) The child will choose a picture and tell a story about the picture. He will use a tape recorder to record his story.

Conditions:

Learner Characteristics:

Situational Variables:

Teacher Strategy: Developmental

1. When a child shows interest in the listening center the teacher explains why the pictures are there and the tape recorder is set up.
2. Once interest is shown the teacher moves about the room leaving the child to develop and record his story.

Content: Recorder and tape (blank)
Ear phones for using after story has been told.
Various pictures such as the story pictures from Peabody Lang Kit.
Situational pictures such as:

1. a child crying because she fell and another child helping her.
2. two children standing outside a dark forbidding house.
3. a boy chasing an unhappy looking dog.

Evaluation:

Activity:

Learner Outcome: To develop the child's ability to express herself using the identified grammatical patterns of Standard English.

Conditions:

Learner Characteristics:

Situational Variables:

Teaching Strategy: directive, employing repetition and unison response, and following Gagne's steps for teaching a concept.

Content: assorted familiar round objects (balloons, ball, record, quarter, small saucer, jar lid, round hand mirror) and a square wooden block and wooden triangel.

This lesson has the dual purpose of introducing the concept of "roundness" and developing the syntactical construction of the simple negative.
1) introduce concept with a circle drawn on the blackboard, using model statement "this is round", then follow with two concrete positive instances of concept asking the children individually "What is this?" and then "Is this round?"; have children individually or in unison repeat "This is round." (modeling the correct response for them when necessary);
2) introduce a negative instance of the concept (a square block), repeating same response pattern as above using the simple negative construction "This is not round";
3) with both a positive and negative instance of the concept, compare and have the children repeat in unsion the appropriate response;
4) have each child correctly identify one (different) object as not round by stating "This is not round".
At the end of the lesson each child was given a round balloon.

Evaluation:

Activity:

Learner Outcome: To be able to use simple positive and negative sentence constructions.

Conditions:

Learner Characteristics:

Situational Variables:

Teahing Strategy: Directive

I will ask the children "What is this?" If necessary I will identify the shell for them. Then ask questions which require positive or negative sentences in response, such as: "Is it hard?" "Is it gooey?" "Do you like it?", etc.

Each child will answer questions about the conch shell using a complete positive or negative sentence structure. Each child will use both sentence forms during the course of the lesson. I will call on them in turn, and supply the correct response if they do not use it, so that they may imitate the form.

Content: one large pink and orange conch shell.

Evaluation:

Activity:

Learner Outcome: The ability to use pronouns correctly

Conditions:

Learner Characteristics:

Situational Variables:

Teaching Strategy: We play a game called "I like" and "She likes". I ask Melanie questions about herself or her sister. She must answer each one by starting with "I like" or "She likes". For every correct usage she chalks up a point by her name on the board. She also gets points for saying "I don't know", since she ordinarily would have said "Me don't know". She thought of this herself. When she gets fifteen points she can draw pictures of things she likes on the board.

Content: A chalkboard and chalk are the only items needed.

Evaluation:

Activity: Looking at Picture Books

Learner Outcome: To answer questions using the syntactic forms of noun phrase, verb phrase, prepositions, negatives, imperatives, possessives, adjectives, adverbs.

Conditions:

Learner Characteristics:

Situational Variables:

Instructional Strategy: Consists mainly of reading portions of the books and hopefully getting the children to verbalize about them. I provide corrective feedback.

Questioning strategies:
"What color is the strange animal?"
"What are they doing?"
"Where is Madelene?"
"Tell Thidwick to get rid of those animals."
"Whose horns are these?"
"Describe the fish" (child holds the book away from me)
"Close that book quickly. How did you close it?"

Content: Books: Dr. Seuss: Red Fish, Blue Fish
Thidwick the Big Hearted Moose
Horton Hears a Who
Ludwig Bemelmans: Madeline
The Sesame Street Book of Puzzlers

Evaluation:

Activity:

Learner Outcome: To develop the child's ability to express himself in noun phrases, with prepositions, in cause and effect sentences, and with auxiliary verbs.
To encourage verbalization and questioning as a means of expressing and gaining information.
To guide the child from his present syntax pattern to move complex syntax patterns.
To develop language abilities which will enable the child to describe the characteristics of objects without relying on visual props.

Conditions:

Learner Characteristics:

Situational variables:

Noun Phrases:
What is this? (point to whole plant)
What is this? (point to blossom)
What color is it?
What are these? (point to peppers)
What color are they?
What are these? (point to leaves)
What are these? (point to stems)

Prepositions:
What are the blossoms?
What do we do with this? (handing his water)
Where does the water go?
Then what happens?

Causal:
What would happen if the plant didn't get any water? Why?
What would happen if I broke one of the branches? Would that part of the plant live?
What would happen if the plant didn't have any dirt around it?
What would happen if we gave it too much water? Why?

"Have":
What have you done with the water?
Where has the water gone?
What have you gotten on your finger? (touching dirt after watering)
Where have you put the empty glass?

Conclusion:
What did you learn about this pepper plant? Does it need food like you do? What are the parts of the plant? (Various other questions would be formulated if the child needs guidance in expressing what he has learned.)

Similar activities and questioning could be set up daily, discussing such topics as pictures the children are coloring in coloring books, making popcorn, various costumes the children could dress up in, and how to build a construction out of blocks.

Activity:

Learner Outcome: To develop the child's ability to verbalize eagerly and with ease .
Have the child be aware of the grammatical patterns of Standard English and to eventually have the ability to express himself using those patterns.
Have the child seek and gain information through asking questions.
To have child understand characteristics of objects in the terrarium so he can describe them later without visual props.

Conditions:

Learner Characteristics:

Situational Variables:

Teaching Strategy:
1. extension
2. elaboration
3. expansion
4. encoding (questioning strategies)

Noun Phrases:
1. What is on the table?
2. What is in the bowl?
3. What else is in the bowl?, etc.
4. What color is the moss?
5. How many pine cones do you see?

Verb Phrases:
1. How did I get the objects to go in the terrarium?
2. What did I do to get these objects?
3. How does the dirt help the plants?
4. How would you get the gravel out to the bowl?
5. How can we keep these plants alive?

Prepositions:
1. Where is the terrarium?
2. Where are the rocks? Tell me.
3. Where are the leaves of the ferns?

Contractions and Causal:	Causal:
1. What will happen if the plants get too much sun. Why?	1.
2. Should we water these plants every day?	2.

Why not? Causal:

3. Do we find these plants at the beach? Why? 3.
4. Could these plants grow in a different kind of container? Why? 4.

Concluding Statement: Tell me all you can about the terrarium. How are these plants different from ones you see in gardens around the house ?

Content: I will use a terrarium which consists of rocks, charcoal, moss, ferns, dirt, and pine cones.

00001

Activity:

Learner Outcome: To use the following syntactical structures.

Conditions:

Learner Characteristics:

Situational Variables:

Teaching Strategy: Questioning strategies to elicit the appropriate syntactical structures.

Noun Phrases:
1. What is this? (point to the flour
2. What color is this bowl?
3. Is the flour soft or hard?

Verb Phrases:
1. What are we doing? (stirring, pouring, mixing, etc.)
2. Now what are we doing? (rolling clay, pounding clay)

Prepositions:
1. Where is the flour?
2. Now where is the flour? (in the bowl)
3. WHere are you sitting?
4. Where is the bowl?

Passive:
1. How did the clay become red?

Negative:
1. Is the flour purple?
2. Where did you buy the flour?

Causal:
1. If we did not add the water to the flour and salt, would we still have clay?
2. If we did not add the coloring, would the clay be red?

Have:
1. Tell me what I have done. (roll clay into ball)
2. Now tell me what I have done. (pound clay flat on table)

Separation:
1. Make a snake with the clay. What did you do with your clay?

Past tense:
1. Make your clay flat. What did you do?

Possessives:
1. Whose clay is this? (point to child's)
2. Whose clay is this? (point to own clay)

Adjective:
1. Tell me about your clay.

Adverb:
1. Pound your clay. Now tell me how you did that. (soft, hard, etc.)

Content: flour, salt, water, bowl, spoon, measuring cup, tempra paint (powdered) or food coloring.
Recipe: 3 parts flour, 1 part salt, water to proper consistency add color and mix until color is vivid.

Evaluation:

CONDITIONS TO DEVELOP THE ABILITY TO ASK QUESTIONS AS A MEANS OF SEEKING AND GAINING INFORMATION.

00064

Activity:

Learner Outcome: To be able to ask questions to gain information (syntactical outcome)

Conditions:

Learner Characteristics:

Situational Variables:

Teaching Strategy: Developmental Process

1. A big envelope contains a picture of an object; envelope tacked on bulletin board, divider, center.
2. Object is for children to ask questions, using "wh" words and within time limit find out what hidden picture shows.
3. A child can be in charge and even select the picture to stump the others.

Content: File of pictures (Peabody Language, Kit Pics good) large envelope or tagboard envelope or pocket the "wh" words in evidence.

Evaluation:

00065

Activity:

Learner outcome: To develop the ability to ask questions as a means of seeking and gaining information.

Conditions:

Learner Characteristics:

Situational Variables:

Teaching Strategy: Developmental
On the table is a decorated box labeled the Mystery Box with a mystery object inside.
Each child writes these questions about what's inside so they can make an approporiate guess.
As each child does this center, he puts the questions on the teacher's desk and she answers them at the end of class.

Content: A mystery box, a secret item inside the box, such as a nail, paper clip, or stuffed animal, slips of paper to write the questions on.

Evaluation:

Activity:

Learner Outcome: To develop the ability to ask questions as a means of seeking and gaining information. (With the child used here, I will be attempting to reinforce this ability.

Conditions:

Learner Characteristics:

Situational Variables:

Teaching Strategy: Directive

A. "What Do I Have?" game:

1. Child is shown a paper figure of a rabbit. The figure is discussed, and the child is told that the object of the game is to make the figure look real (i.e., to put various distinguishing features on it.) In order to do this, he must pretend to be the rabbit and must ask questions about what the rabbit has. That is, he is to ask questions such as, "Do I have a nose?" "A mouth?" Each time he asks an appropriate question, the facilitator expands his statement: "Yess, you have a mouth, and it is re . . ." She then gives him a representation of the appropriate body part, which has been cut from colored construction paper, to glue on to the main body of the rabbit.
2. The process is repeated with a duck and then with a gingerbread man figure. He dresses the ginger bread man figure with all the items listed below in "content".

Content: Paper figures of a gingerbread man, rabbit, and duck cut from construction paper in various colors. Colored accoutrements for each: gingerbread man: hair, eyes, mouth, scarf, shirt, buttons, pants, shoes, belt; rabbit: tail, eye, nose; duck: feet, eye, mouth. Glue.

Evaluation:

Activity: Twenty Questions

Learner Outcome: To develop the ability to ask questions as a means of seeking and gaining information.

Conditions:

Learner Characteristics: 5 to 6 year old children.

Situational Variables:

Teaching Strategy: Directive

Call each of the children before the group in turn. Hand him a card to hold so that no one else can see it. Have him whisper in your ear what it is (vary the difficulty to suit the ability of the child). Have the rest of the group ask questions about it. Is it something you wear?, etc. The leader answers only "yes" or "no". See if the group can guess the object with 20 questions or less.

Content: Several pictures of familiar objects.

Evaluation:

Activity:

Learner Outcome: To develop the ability to ask questions
To develop the ability to use grammatical structures
To practice verbalizing

Conditions:

Learner Characteristics:

Situational Variables:

Teaching Strategy: Directive the first time.

1. The instructor or a child says "I'm thinking of someone."
2. The children take turns asking questions beginning with:
   a. "Is it...(aboy)?"
   b. "Does...(she have long hair)?"
   c. "What...(color is his hair)?"
   d. "Where...(does she sit)?"
   e. "How...(tall is he)?"
3. Grammatical perfection should not be demanded of young children (K-1) but older children should ask their questions correctly (depending on their level of achievement, of course.) Children may model the correct grammar of the instructor or of other children, but there ought to be no penalty for incorrect questions - only encouragement for correct ones.

Content: None

Evaluation:

00259

Activity: "I have something in my box..."

Learner Outcome: To develop the child's ability to ask questions as a means of seeking and gaining information.

Conditions:

Learner Characteristics:

Situation Variables:

Teaching Strategy: Developmental

Learning Facilitator: "I have something in my box, can you guess what it is?"
Ask me a question like "Is it big?"
Learning Facilitator attempts to encourage the child to ask such questions as:
Is it big?
Is it green?
Is it heavy?
What do you do with it?
Can you eat it?

Evaluation:

CONDITIONS TO DEVELOP THE CHILD'S ABILITY

TO VERBALIZE EAGERLY AND WITH EASE.

00071

Activity:

Learner Outcome: To develop the child's ability to verbalize eagerly and with ease.

Conditions:

Learner Characteristics:

Situational Variables:

Teaching Strategy: Developmental

Learning Facilitator and child will interact using doll as focus of interaction.

Do you have a doll you play with at home?
Is it like this doll?
Does your doll have a name?
What is this doll's name?
Would you like to help me dress it?
What clothes shall we chose?

Content: A doll
doll clothes

Evaluation:

Activity: What did we just see?

Learner Outcome: To develop a precise language of reference so that the child will be able to specify the characteristics of objects precisely and accurately without needing visual props. (Don Moore) - so child can identify characteristics of objects not in immediate environment.

Conditions:

Learner Characteristics:

Situational Variables:

Teaching Strategy: Directive/Developmental

Learning Facilitator presents the child with 5 objects and says, "Now let's play a guessing game. (Place objects back into box) Put your hand in the box and touch one of the toys, and try to tell me what you have." Encourage the child to describe the item. "Do you remember what it looked like?
What color it was?
How big?
How would you use it?
Could you sit in it?
Does it grow in a garden?

Content: 1 cardboard box with lid
1 medium-sized red ball
1 small blue box
1 toy chair (doll-house size)
1 doll shoe
1 paper flower

Evaluation:

Activity: Baking banana bread

Learner Outcome: To develop a precise language of reference so that the child will be able to specify the characteristics of objects precisely and accurately.

Conditions:

Learner Characteristics:

Situational Variables:

Strategy: Directive/developmental

Make banana bread with children, conversing during the entire lesson, providing verbal feedback and asking questions to encourage verbalization.

examples:
What happens when you mix the wet and dry ingredients together?
What happens to the batter when you put it in the oven?
Also, talk about each ingredient describing color, texture, etc.

Content: bananas, sugar, flour, salt, baking soda, eggs, pan, bowls, spoons, oven.

Evaluation:

STEP 111: TEACHER PREPARATION PROGRAM FOR SYNTAX DEVELOPMENT

COMPETENCIES NEEDED BY LEARNING FACILITATORS FOR THE DEVELOPMENT OF SYNTAX IN YOUNG CHILDREN

Orienting Experiences
Foundation Experiences
Selected Readings for Syntax
Measurement of Syntax Exercise

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Competencies Needed by Learning Facilitators for the Development of Syntax in Young Children.

Skill Competencies. The trainee will be able to:

1. Elaborate on child's verbalization
2. Expand the child's thoughts.
3. Extend the child's words to nearest intended meaning of the child.
4. Use all syntactical forms of English grammar in speech when interacting with children.
5. Analyze developmental grammar of a child from one word responses to the highest forms of transformations used by seven-year-old children.
6. Use the Northwestern Syntax Screening Test with a target child.
7. Analyze syntax using Leco Developmental Sentence Types.

Cognitive Competencies. The trainee will demonstrate evidence of cognitive knowledge in:

1. Role of expansion of thought in syntax development.
2. Role of extension in child's syntax development.
3. The development of syntax in Standard English.
4. The elements that comprise Standard English such as types of phrases, inflections, transformations, and morphology.
5. Role of elaboration in syntax development.
6. Major theorists points of view in the development of syntax.

Orienting Experiences

The following activities are designed to facilitate the student's sensitatization to the development of children's expressive language skills, particularly syntax, the conditions in the environment that assist the child's grammatical development and the skills learning facilitators need to provide the conditions.

1. Students will interact with a 2 to 4 year old child on video-tape to later analyze their language patterns.
2. Students will read overview paper on syntax development. This is located in the Cognitive Understandings of Language Development Module.

Foundation Experiences

The following experiences are designed to assist trainees in conceptualizing and performing acts related to the development of the skills necessary in providing appropriate environmental conditions for the development of syntax.

Attend lectures on Lee's Developmental Sentence Types

Attend a lecture on basic transformations of Standard English.

Lee's Slide Tape Presentation

Trainees will analyze pre- and posttest measures of mother

and child interaction. The mother recieved a language treatment after the pretest. Trainees will use Lee's Developmental Sentence Types to analyze the syntax of the mother and child. Mother's interaction will also be measured in terms of corrective feedback techniques. Trainees will then compare pre- and posttest differences. Trainees will meet in small groups and compare their results. Trainees should be at least 80 percent correct in their analyzes.

Trainees will attend lecture on Lee's Developmental Sentence Types.

Trainees will analyze the syntax transformations from a conversation between an adult and child using Menyik's scale. Trainees will then examine their analyzes in small groups, discussing their reasons for classification. Trainees should have classified the tranformations at least 80 percent correctly.

Trainees will read the module on syntax development and the selected readings. A class period will be related to the discussion of these readings and how to provide learning experiences that will develop syntax.

Selected Readings for Syntax

Development of Syntax

Athey, I.J. Synthesis of papers on language development and reading. Reading Research Quarterly, Fall 1971, 7,1, pp. 9-15.

Athey, I.J. Language models and readings Reading Research Quarterly, Fall 197 , 7, , pp. 16-110.

Berko, J. The child's learning of English morphology, Word, 1958, 14, 150-117.

Bellugi-Klimer, U., & Hass W., Syntactical structures for modeling in preschool language training. Paper prepared for Early Childhood Research Center, National Laboratory on ECE, 19 .

Brown, R., & Bellugi, U., Three processes in the acquisition of syntax. Harvard Educational Review.

Cazden, C.B. Children's questions: Their forms, functions and roles in education Young Children, 1970, 202-220.

Menyuk, P. Syntactic structures in the language of children. Child Development, 1963, 34, 407-422.

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Bellugi-Klimer, U. Some language comprehension tests. In C.S. Lavatelli (Ed.), Language training in early childhood education. Urbana, Ill: ERIC Clearinghouse on Early Childhood Education, University of Illinois, 1971, 157-169.

Slobin, K.I., & Welsh, C.A. Elicited imitation as a research toll in developmental psychologo linguistics. In C.S. Lavatelli (Ed.), Language training in early childhood education, Urbana, Ill.: ERIC Clearinghouse on Early Childhood Education, University of Illinois, 1971, 170-185.

Lee, L.L. A screening test for syntax development. Journal of Speech and Hearing Disorders, 35, 2, 1966, 103-112.

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Readings for Psycholinguistics

Yergin, D. The Chomsky revolution. New York Times Magazine, December 3, 1972.

Athey, I.J. Synthesis of papers on language development and reading. Reading Research Quarterly, Fall 1971, V111, 1, 9-15.

Athey, I.J. Language models and reading. Reading Research Quarterly, Fall 1971, V11, 1, 16-110.

Lenneberg, E.H. On explaining language. Science 164, 3380, May 1969,

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Lenneberg, E.H. The neurology of languages. DAEDALUS, Summer 1973, 115-134.

Syntax development in children with developmental delays.

Rosenthal, J.H. A preliminary psycholinguistic study of children with learning disabilities. Journal of Learning Disabilities, 8,3, August 1970, 11-15.

Fygetakis, L.J., & Ingram, D. Language rehabilitation and programmed conditioning: A case study. Journal of Learning Disabilities, 6,2, February 1973, 5-9.

Wiig, E.H., & Semel, E.M., & Grouse, M.B. The use of English morphology by high-risk and learning disabled children. Journal of Learning Disabilities, August/September, 6,7, 1973, 59-67.

Stark, J.; Foster, C.; Gidden, J.J.: Gottsleben, R.H., & Wright, T.S. Teaching the aphasic child. Exceptional Children, October 1968, 149-

Additional optional readings on syntax.

If further clarification of the lecture is needed read, Lee, L.L. Developmental sentence types: A method for comparing normal and deviant syntactic development. Journal of Speech and Hearing Disorders.

Hobson, A. Systematic language modeling. Contemporary Education, 15,4, 19 .

Nelson, Katherine Structure and Strategy in learning to talk. Monograph - Society for Research in Child Development. 38, 1 & 2, 1973.

Menyuk, P. Syntactic rules used by children from perschool through first grade. Child Development, 1964, 35, 533-546.

Cazden, C.B. & Bellugi U. The Child's grammar from 1 to 111. In Hill, J.P. (Ed.) Minnesota Symposium on Child Psychology 1969 pp. 28-73.

Measurement of Syntax Exercise

On the following pages the trainee will analyze the mother and child's syntax useage by means of the Lee's Developmental Sentence Types. The coding system provided is helpful in doing this.

You may wish to work in small groups while analyzing this mother-child interaction as it is helpful to discuss your reason for selecting a particular level and category.

Upon compection you may check your ratings against those provided by the instructor.

Next you will want to analyze the type of corrective feedback provided by the mother. Follow the same procedure when analyzing the syntax.

CODING SYSTEM

I NP - Level I - noun phrase

I D - Level I - designative

I P - Level I - predicative

I V - Level I - verbal

I F - Level I - fragments

I SP - Level I - stereotyped phrases

II NP - Level II - noun phrase

II F - Level II - fragments

II VP - Level II - verb phrase

III DC - Level III - designative construction

III PC - Level III - predicative construction

III VPC - Level III - verb phrases constructions

III SC - Level III - stereotyped constructions

IV DS - Level IV - designative sentences

IV PS - Level IV - action-actor sentence

IV SC - Level IV - stereotyped constructions

V I - Level V - Interrogative

V N - Level V - negative

V DN - Level V - do & negative

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MOTHER-CHILD INTERACTION

Syntax level	Sentence type		Type of Corrective Feedback by Mother
		P - Look at the book Allsion See the mittens Can you say mittens?	
		C - mittens	
		P - The mittens are red And what is that?	
		C - ball	
		P - The ball is red and blue and white and the ball is round	
		C - red	
		P - The ball is round	
		C - Round	
		P - And it's made of rubber. What is this?	
		C - apple	
		P - apple and the apple is red	
		C - dat apple	
		P - And that's a pear, the pear is yellow and the apple is red	
		C - apple and pear	
		P - apple and pear	
		C - dat a pear	
		P - yea - that's a pear and that's a what?	
		C - apple	

Syntax level	Sentence type	Type of Corrective Feedback by Mother

P - apple and the apple
is red and what's that?

C - dats doll down

P - that's a chair huh?
What do you do with
a chair?

C - dat down

P - You sit down huh!
Oh! What is this?

C - It eyes

P - That's the dog's eyes
and what is this?

C - His legs

P - His legs

C - leg

P - Where's your eyes
Where's your nose
Where's your mouth

C - right there

P - Where's your stomach?

C - right there

P - Where's your fingers?
Where's your ears?

C - right there

P - Where's your fingers?
Where's your ears?

C - right there

P - Where's your teeth?
Those your teeth?
That's good Allison.
Ooh! What is this?

C - ans

P - dogs

C - dog

Syntax level	Sentence type	Type of Corrective Feedback by Mother

P - there's one

C - one

P - Two - two, say two

C - dog

P - Say two

C - two dogs

P - say three

C - three

P - dogs
What are these?
What are chese?

C - ba

P - balls

C - balls

P - What is this?

C - truck

P - Come on ----
OK. What is this
Allsion?

C - truck

P - What color is the truck?
Excuse me

C - 'cuse me

P - What is this?

C - truck

P - truck and what color is
the truck?

C - red

P - Yes, the truck is red and
the truck is made of metal - I
guess it's metal. And what are
these?

Syntax level	Sentence type	Type of Corrective Feedback by Mother

C - wheel

P - Wheels
Come on - come back

C - back

P - Come on - come look at
the birds

C - birds come

P - Yeh! You want to see the
birds? Look at the bird -
That's a big bird.
See big bird
And what is this?

C - Man

P - Man
That's a man and what are
these?

C - Man

P - Is that a man?
It's a boy and a girl.
Boy and girl.
Can you say boy - boy

C - boy, boy

P - You mean bye-bye
Look at the ship
See the big ship
And what is this?

C - Big Shoop

P - Bathtub

C - Bathtub

P - What do you do in the bathtub?

C - 'ake 'ath

P - take a bath

C - bath

P - take a bath

Syntax level	Sentence type		Type of Corrective Feedback by Mother		
		C - take a bath			
		P - Oh you going to hug me. Oh! Take a bath.			
111	VPC	P - Look at the book Alliston	3g		
111	VPC	See the mittens			
V	I	Can you say mittens?			
	O	C - mittens			
IV	PS	P - The mittens are red	1	3a	
V	I	And what is that?			
	O	C - ball			
IV	PS	P - The ball is red and blue'	1	3a	
		and white and the ball is	1	3a	
		round			
	O	C - red			
IV	PS	P - The ball is round	3a	3f	
	O	C - Round			
V	TF	P - And it's made of	3d		
		rubber. What is this?			
	O	C - apple			
IV	PS	P - Apple and the apple	1	1	3a
		is red			
I	D	C - dat apple			
I	D	P - And that's a pear	3f		
		the pear is yellow	3a		
		and the apple is red	1	3a	
	O	C - apple - pear			
111	F	P - apple and pear	1		
1	D	C - dat a pear			
1	D	P - yes-that's a pear	1	1	
		and that's a what.			
	O	C - apple			
IV	PS	P - apple and the apple is red	1	1	3a
V	I	and what's that?			

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Syntax level	Sentence type		Type of Corrective Feedback by Mother
I	D	C - dats doll down	
I	D	P - that's a chair huh?	3l
V	I	What do you do with a chair	3f
I	F	C - dat down	
IV	AA	P - You sit down huh!	
v	I	Oh! What is this?	
I	D	C - It eyes	
IV	DS	P - That's the dog's eyes	3e
V	I	And what is this?	
I	NP	C - His legs	
I	NP	P - His legs	1
	O	C - leg	
V	I	P - Where's your eyes	3e
V	I	Where's your nose	3e
V	I	Where's your mouth	3e
I	F	C - right there	
V	I	P - Where's your stomach?	3e
I	F	C - right there	
V	I	P - Where's your fingers?	3e
V	I	Where's your ears?	3e
I	F	C - right there	
V	I	P - Where's your teeth?	3e
V	I	Those your teeth?	3e
I	SP	That's good Allison.	
V	I	Ooh! What are those?	
	O	C - ans	
	O	P - dogs	3g
	O	C - dog	
IV	DS	P - there's one	
	O	C - one	
III	VPC	P - Two - two, say two	3c

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Syntax level	Sentence type		Type of Corrective Feedback by Mother		
	O	C - dog			
III	VPC	P - Say two	3c		
I	NP	C - two dogs			
III	VPC	P - say three	3c		
	O	P - three			
	O	C - dogs			
V	I	What are these?	3g		
V	I	What are these?			
	O	C - ba			
	O	P - balls	3g		
	O	C - balls			
V	I	P - What is this?			
	O	C - truck			
I	SP	P - Come on --- OK. What is this Alliston	1		
	O	C - truck			
V III	I VPC	P - What color is the truck? Excuse me	1		
III	VPC	C - 'cuse me			
V	I	P - What is this?			
	O	C - truck			
V	I	P - truck and what color is the truck?	1	1	
	O	C - red			
iv/V V/V	PS/? ?/I	P - Yes. The truck is red and the truck is made of metal I guess it's metal. And what are these?	1	2	3d
	O	C - wheel			
	O	P - Wheels	1		
I/I	SP/SP	Come on - come back			

Syntax level	Sentence type		Type of Corrective Feedback by Mother	
	O	C - back		
I/III	SP/VPC	P - Come on - come look at the birds	3f	
I	V	C - Birds come		
V	I	P - Yeh! You want to see the birds?	1	1
III	VPC	Look at the bird - That's a big bird!	1	3h
III	VPC	See big bird	1	3h
V	I	And what is this?		
	O	C - Man		
	O	P - Man		
I	D	That's a man and	2	
V	I	what are these?		
	O	C - Man		
V	I	P - Is that a man?	2	
V	N	It's a boy and a girl	3g	3g
III	F	Boy and girl	3g	3g
V	I	Can you say boy - boy	3g	3g
	O	C - Boy, boy		
IV	AA	P - You mean bye-byw	3g	
III	VPC	Look at the ship	3g	
III	VPC	See the big ship	3g	
V	I	And what is this?	3g	3h
I	NP	C - Big Shoop		
	O	P - Bathtub	3g	
	O	C - Bathtub		
V	I	P - What do you do in the bathtub?	1	
I	V	C - 'ake 'ath		
III	VPC	P - take a bath	1	
	O	C - bath		
III	VPC	P - take [illegible]ath	2	
III	VPC	C - take a bath		

Syntax level	Sentence type		Type of Corrective Feedback by Mother
V	DN	P - Oh you going to hug me	3f
III	VPC	Oh! Take a bath.	1

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